

A Practical Application of “Writing” Hypertext Literature in the English Education of the Elementary School

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Oh, Sei-chan. (2005). A practical application of “Writing” hypertext literature in the English education of the elementary school. *English Language & Literature Teaching*, 11(2), 19-34.

Hypertext raises question to general assumptions about our conventional conceptions of education. In this essay, three kinds of learning-models are presented by the application of "writing" hypertext literature to the English education of the elementary school. These models, which I call the "scene-centered" system, give knowledge to learners in non-linear, non-sequential structure. The term "scene" is a single concept or idea composed of a single sub-text, which is to be made by the group of students. This system is focused on the collaborative composition of students. Students, by generating sub-texts and connecting texts, perform the educational activities to expand the source text. The "scene-centered" system is, to put it into a Barte's term, a "writerly text." But in order to "write," "reading" should be accompanied. So, this system is a learning model in which writing and reading are carried on simultaneously. In all the process, students play a role of multi-user, with three access rights: read, write, and annotate. So, students making use of hypertext systems will act as reader-authors. And teachers will take the new role in collaborative writing environment. No longer the central authoritarian evaluator, they will become consultants, co-writers, coaches of their students.

[hypertext/hypertext literature/scene-centered/multimedia/information/ learning /new paradigm/non-linear/learning model/branch]

I. THE DOCUMENT OF THE PRINT MEDIUM AND HYPERTEXT

Information is transmitted from the sender to the receiver. In this process, the flow of information can be divided into a linear and a multi-linear flow. The document of the print medium is linear. In this text, knowledge is embodied not by the individual dimension, but by the letter shared with the community. So it gains the impression that it has objective and unchangeable properties. Jay David Bolter points out, it is “the static pages,”(9) which have a fixed position and structuralize all the changeable things. Its physical stability makes allowances for the writer to have stability and unity. Reading such texts, paralleling with the motion of eyes, proceeds from the upper to the bottom of the texts with the linear direction. With this flow, knowledge flows from the writer to the reader. Therefore the commitment of the reader to the creation of the text is blocked, and the reader cannot avoid hearing the voice of the writer unidirectionally.

Hypertext, the term which was coined by Ted Nelson, is the presentation of information as a linked network of nodes, an integrated and self-sufficient unit of information. So, hypertext allows readers to be free to navigate in a non-linear fashion, which is diverged at any place and gives choices to the reader to link. Espen J. Aarseth points out, “A nonlinear text is an object of verbal communication that is not simply one fixed sequence of letters, words, and sentences but one in which the words or sequence of words may differ from reading to reading because of the shape, conventions, or mechanisms of the text.”(51) So, it can be said that hypertext is a series of a text cluster connected to a lot of related texts.

Hypertext lets you connect screens of information using associative links with the mouth by putting special mark or underlined letters. So, “the text in progress becomes interconnected and linked with the entire world of information.”(161) Since it goes not with regularity but with coincidence and individual tastes, it is called non-linear and multi-linear text.

Hypertext is an inter-textuality space which is opened to both writers (generators of texts) and readers (browsers or searchers). Because it affords the continual interaction between writers and readers, the stability of hypertext is destroyed. To put into the terms of Roland Barthe, a poststructuralist, the text of print medium can be said to be a readerly text, and hypertext a writerly text.

“. . . the goal of literary work (of literature as work) [which] is to make the reader no longer a consumer, but a producer of the text. Our

literature is characterized by the pitiless divorce which the literary institution maintains between the producer of the text and its user, between its owner and its consumer, between its author and its reader. This reader is thereby plunged into a kind of idleness — he is intransitive; he is, in short, serious: instead of functioning himself, instead of gaining access to the magic of the signifier, to the pleasure of writing, he is left with no more than the poor freedom either to accept or reject the text: reading is nothing more than a referendum. Opposite the writerly text, then, is its countervalue, its negative, reactive value: what can be read, but not written: the readerly. We call any readerly text a classic text. (S/Z, 4)

Challenging the cliché assumptions on the educational concepts of the past which teachers and students have shared, and raising essential questions to the general assumptions of the text, hypertext, just as in the way of changing the roles of writers and readers, changes those of teachers and students.

But at present in Korea, the term hypertext is not used widely and not well understood. Moreover, the intensive studies on it are not yet embodied. Therefore, in this essay, I'd like to search how hypertext can change the educational environment, and then to explore how such system can be applied to the English education in an elementary school, with the presentation of three kinds of teaching models as a form of hypertext literature.

II. THE EDUCATIONAL ENVIRONMENT OF THE HYPERTEXT SYSTEM

Because hypertext products mimic the brain's ability to store and retrieve information by referential links for quick and intuitive access, readers, instead of reading a text from the start to the end, can read according to their own choice, only by clicking the special icon, mark, or underlined part displayed in the screen with the mouse. Hypertext expands itself like the web, and thus suggesting infinite probability, it is indifferent to the end of the story. Because it takes the nonlinear structure and would not propose a fixed and unitary conclusion, and allows any form of writing, it is an opened hyper space.

The main feature of hypertext is branching itself. With “the spatial and temporal qualities of the Internet as an effect of the bricolage of digital images, text, and other elements linked together”(The World Wide Web, 145), hypertext allows all the various texts including graphic, sound, and visual images. For example, when reading poetry, by linking a special mark, you can meet graphic or sound or video text. So, in hypertext, you can be free from the stereotyped thought that a text should be composed of letters, and you can go beyond the prescribed and restrictive thought, so that you can express yourself without any restriction. With the very features of the hypertext, it can be applied variously to the education.

The application of hypertext, like the Gary Marchionini's saying, "each time a new technology is applied to teaching and learning, questions about fundamental principles and methods arise"(369) transformed the paradigm of teachers, students, and the essence of knowledge in changed educational environment.

The non-linear educational system of hypertext makes a distinction from the linear one. A written text, a document, can be static in the sense that it should be prepared and stored in advance. But hypertext is dynamic because it responds to the user input or because it allows for creating another texts. If we say that the written text is local, we can say that hypertext is global, because the user can come from anywhere with the assistance of a computer network like the Internet. In linear educational system, there is a block because of the stiff borders between different subjects. On the other hand, hypertext provides a more effective means for an isolated single subject to expand itself than anything else in the past, and a good means for the single courses to be combined with other subjects. In other words, hypertext provides the integrating method of various heterogeneous subjects.

In the linear system in the past, teachers, as information-givers, are recognized as being authorized for the teaching. Even in learner-centered system, the initiative of learning belongs to teachers so much that they may control all the educational activities of students. However, as an educational environment is changed from teaching into organizing information, with knowledge flowing in the multi-linear way, teachers will take a new role of assisting students to study themselves. At this point, teachers are no longer the author or shaper of the classroom narrative, and they become guides, judges and adviser of lessons. Teachers would not welcome all these changes. But they cannot avoid adapting changing educational environment and making their own new role.

The fact that the application of hypertext means students should meet a completely new reader-centered text, will cause the change of paradigm on students, too. Because

students have a right to choose reading paths and shape their reading experience for themselves as well as they are granted certain authorial functions such as the ability to add sub-texts, add links, etc, they are placed not outside, but inside of the educational field. In accordance with this, learning will be transformed into a method of know-how from that of know-what. Students should focus their learning on how to organize knowledge, not on how to obtain the established fact. So, in the hypertext system students can be the subjects and objects of leaning, which means that the role of students is to create knowledge, not to accept it passively, just as in hypertext “the roles of author and reader begin to shift as the being of the text changes.”(The New Writing, 323)

The easy collecting data in the hypertext environment accelerates the speed of changing. In the past, the collecting data, more often, was available in libraries. But it accompanies the time and spatial restriction. In other words, you could get the data you want by spending much time and moving to some place, and sometimes you might fail to get them. But hypertext makes allowance for getting data easily and conveniently. Moreover, it enables the learners to judge the suitability and quality of the data, which makes them free from teachers as information-givers. Such activities require logical and critical thought of learners. Therefore, learners, in hypertext environment, can develop the abilities of thinking, reasoning, and creativity than in any educational system.

Hypertext allows for edutainment in which learning is mixed with entertainment. Learners can be free from the stiff learning system which requires unitary efforts of students, and they can generate new texts continually as if they were playing. And also, hypertext can connect various kinds of levels of learning, so it allows learners to learn at their own speed.

Hypertext makes allowances for tele-education beyond the time and spatial restriction. Students will search for the educational sites and will be taught from experts of all subjects. In this process, only specialized teachers might remain and with the death of school, the death of teachers might be discussed. But this fear is overrated. So far as knowledge is transmitted in one way, this trend might be true, but just as hypertext is nonlinear and multi-linear, the nature of knowledge will be changed into being nonlinear and multi-linear. In this situation, there will be a new role of the school and teachers. Schools in this system might be a center of educational activities for learners to connect and generate texts, and teachers might be advisers and guides of such activities.

III. THREE KINDS OF LEARNING MODELS OF HYPERTEXT LITERATURE

With the advancement of technology, the structure of society is changed. In accordance to the changes, the educational system should be changed. The educational system using hypertext is, I think, essential to the growing generation. But in order for such system to work, there will be needed some assumptions in the light of students, schooling facilities, and teachers.

First, in order to allow the writing of hypertext, students are required at least rudimentary computer operating abilities. As well as word processing, students can manipulate the graphic, and sound images by using software programs. It is needless to say that they should be active students. Second, the schooling facility should provide scanners, CD writers, and computers for students to function properly. Third, teachers need to have enough computer knowledge to assist and advise students.

The reality is that our education facilities poorly lack these essentials. The other concern is that there may be perspectives of the hypertext system being too much for the students to handle. Nevertheless, elementary school students are already moving into the technology of computers with the fast pace. These children are being brought up and educated in a far different environment, compared with their previous generations. Children have gone as far as making personal homepages and communicating freely online. Hyperspace has become another part of their development. Therefore, it is suitable to say that the hypertext system is what the children have been waiting for.

Most of our elementary schools have computer labs, as Seung-Won Park has said the importance of between English proficiency and learning environment (see Park Seun-Won, 127-142), to make a better educational environment. With a little more hardware and software, by allowing the students to use them positively, the hypertext system could be easily conducted, and Also, the problems mentioned above would be solved. Moreover, the teachers nowadays are being given training associated with computers and computer usage is included in their curriculum. They will be well-qualified teachers.

The above thesis focuses on elementary school students and reasons follow: First, the hypertext lesson is more of a single variety lesson rather than an individual subject like math or science which makes it easier for an elementary homeroom teacher to conduct it than that of middle or high school teachers. Second, a hypertext class is unlike the other classes that are based on achieving a lesson objective. Unlike an

ordinary class that dictates and instructs the students as a whole and grades them accordingly, the hypertext system emphasizes an individual's creativity and speculations. Third, students can interact more actively. The sound and visual effects will help the students to interact online. Taking these characteristics of hypertext in consideration, I'd like present some learning model as a form of hypertext literature, which can be called literature by using hypertext. Performing their roles, students will play their roles in an environment for collaborative work. Educational hypertext in this way serves as what Joseph E. McGrath describes as one of those "technological tools . . . designed in part to ease the constraints of the time/activity match in relation to communication among group members."(39) So, their task should be done on the intimate communication with each other.

<Model 1>

In this model, students are organized into five groups, and learning material should be divided into the same scenes. The teacher divides the story of Heungbu & Nolbu into five scenes. (I chose an old Korean fable as a sample, which is familiar to all children. Of course, other fables and self-created stories can also be used.) For example, the first scene is "The kindness of Heungbu towards his greedy older brother Nolbu," the second scene is "The life of poor Heungbu's," the third scene is "Heungbu helps out an injured swallow," the fourth scene is "Heungbu gets a seed of a plant from the swallow," and the fifth scene is "Heungbu finds gold and silver in the fruit of the plant." It should be noted that the number of groups and scenes is equal.

First Stage: Teachers assign the scenes to the teams with unfinished forms, in other words, uncompleted sentence. When each group has one scene, the group tries to complete the unfinished story. So this stage can be called "completing the scene in English."

Second Stage: At this stage, each group takes over other group's texts. In other words, scenes should be circulated to each group so that every student could contact all the scenes. The first group takes over the texts which the second group has made, the second group takes over the texts of the third group, the third group takes over the texts of the fourth group, the fourth group takes over the texts of the fifth group, and the fifth group takes over the texts of the first group. In this way, all the texts should be rotated. Each group should play the role of "making an annotated text." Students manipulate the scene given to them as follows. At first, they put notes on the words or phrases of the original text.

And then they perform the writing activities on the annexed text or link it to another text or make new text by the flow of their consciousness. The texts generated by students will be "everything" written about the subject, or vaguely relevant to it, tied together by them.

Third Stage: At this stage, scenes should be circulated again. The first group takes over the texts of the third group, the second group takes over the texts of the fourth group, and so on. At this stage, graphic images will be added as a background setting. This stage has the strong relationship with art class.

Fourth Stage: At this stage, scenes should be circulated again, too. At this stage, sound images will be added such as the singing of a swallow or the conversation of characters or background music, and so on. This stage has the strong relationship with music class. So this stage can be said to be that of multi-media manipulation.

Fifth Stage: At this stage, all the texts students have written should be loaded into the web. After then, students will appreciate all the texts in all the directions they wish to pursue. In this process, they will experience hypertext once more.

In this model, students are free to make their own texts of any size or any form — from writerly text to graphics or sound — depending on how they wish to make these texts. The texts students make may be writerly texts, graphics, or sound images or a combination of all them. Of course, it sometimes adds support for animation, video, and so on, according to the students' ability. In other words, students take the roles of multimedia creators. Any way, teachers should not restrict students' method of expressing their ideas.

This model can be presented as in figure 1.

FIGURE 1

	Group 1	Scene 1	
	Group 2	Scene 2	
1st stage	Group 3	Scene 3	Completing the scene in English (English composition)
	Group 4	Scene 4	
	Group 5	Scene 5	
2nd stage	Group 1	Scene 2	writing an annotation to the completed scene
	Group 2	Scene 3	(generating a sub-text for main text)
	Group 3	Scene 4	

	Group 4	Scene 5	
	Group 5	Scene 1	
	Group 1	Scene 3	
	Group 2	Scene 4	
3rd stage	Group 3	Scene 5	creating graphic images
	Group 4	Scene 1	
	Group 5	Scene 2	
	Group 1	Scene 4	
	Group 2	Scene 5	
4th stage	Group 3	Scene 1	creating sound images
	Group 4	Scene 2	
	Group 5	Scene 3	
	Group 1	Scene 5	
	Group 2	Scene 1	
5th stage	Group 3	Scene 2	loading all the texts on the web
	Group 4	Scene 3	
	Group 5	Scene 4	

<Model 2>

In this model, students are organized into some groups, and learning material should be divided into a few scenes. As in model 1, the number of groups and scenes should be equal. Let's suppose there are five groups. A teacher prepares different five stories in advance such as Aladdin, Snow White, Gulliver's travel, Cinderella, and Heungbu & Nolbu. Of course, these stories can be different. A group should be divided into three sub-groups. Each group will play different roles and its role should be rotated. And then, this model will be proceed as following stages:

First Stage: The teacher provides the different five scenes to each group in which only the introductory part was written in English. When each group has one story, the first sub-group tries to write the conflict stage of introductory part of the story, the second sub-group to annotate the text which the first sub-group has written, and the third sub-group to generate the graphic, sound or visual images. In other words, each sub-group takes the role as followings: writing a narrative,

making an annotated text, and generating multi-media images. All the five groups perform their task the way mentioned above.

Second Stage: At this stage, the development of narratives should be written. The first group takes over the texts which the second group has made, the second group takes over the texts of the third group, the third group takes over the texts of the fourth group, the fourth group takes over the texts of the fifth group, and the fifth group takes over the texts of the first group. In this way, all the texts should be rotated. In the first group, at this time, the first sub-group plays the role of "making an annotated text," the second sub-group "generating multi-media images", the third sub-group "writing a narrative."

Third Stage: At this stage, the climax of narratives should be written. The first group takes over the texts of the third group, the second group takes over the texts of the fourth group, and so one. Of course, the sub-group should take another role in rotation.

Fourth Stage: At this stage, the result of the narratives should be written. The rotation of the roles is the same mentioned above.

This model can be presented as in figure 2.

FIGURE 2

	Story A		Story B		Story C		Story D	
1st stage	Group 1	sub-g1: narrative	Group 2	sub-g1: annotation	Group 3	sub-g1: images	Group 4	sub-g1: narrative
		sub-g2: annotation		sub-g2: images		sub-g2: narrative		sub-g2: annotation
		sub-g3: images		sub-g3: narrative		sub-g3: annotation		sub-g3: images
2nd stage	Group 2	sub-g1: narrative	Group 3	sub-g1: annotation	Group 4	sub-g1: images	Group 1	sub-g1: narrative
		sub-g2: annotation		sub-g2: images		sub-g2: narrative		sub-g2: annotation
		sub-g3: images		sub-g3: narrative		sub-g3: annotation		sub-g3: images
3rd stage	Group 3	sub-g1: narrative	Group 4	sub-g1: annotation	Group 1	sub-g1: images	Group 2	sub-g1: narrative

		sub-g2: annotation		sub-g2: images		sub-g2: narrative		sub-g2: annotation
		sub-g3: images		sub-g3: narrative		sub-g3: annotation		sub-g3: images
4th stage	Group 4	sub-g1: narrative	Group 1	sub-g1: annotation	Group 2	sub-g1: images	Group 3	sub-g1: narrative
		sub-g2: annotation		sub-g2: images		sub-g2: narrative		sub-g2: annotation
		sub-g3: images		sub-g3: narrative		sub-g3: annotation		sub-g3: images

<Model 3>

In this model, students are organized into three groups. And each group should be 1st sub-group, and the 1st sub-group into 2nd sub-group, and 2nd sub-group into 3rd sub-group. Let's suppose there are 36 students in a class. At first, the number of each group will be 12, the number of 1st sub group will be 6, the number of 2nd group will be 3, and 3rd group will be 1, an individual student. A teacher presents only an introductory part of a story. For example, "There is a warrior. He wants to get a treasure. He starts traveling for it. But he doesn't know where he should go. There are three ways: mountain, sea, and desert. (If you were the warrior, which way would you select? And why?)" In this original text, "mountain," "sea," and "desert" should be marked with icons or underlined part so that students can choose and write the further story. With this preparation, this model will go as following stages:

First Stage: The teacher provides the choice for the direction in which the warrior should go. Once each group (12 persons) is given a choice, the group try to write the reason why the warrior choose the way, and afterwards it should make two kinds of other choices for other group can choose, for example: "On his way he meets _____. He/She/It asks the warrior to help him/her. He/She says, "Please help me. I am in trouble because _____. If you help me, I'll give you a good thing." (Underlined parts should be written by students.) At this point, two kinds of gifts can be made as choices.

Second Stage: At this stage, the choices made in the first stage should be distributed to the 1st sub-group(one 1st sub-group is 6 persons, and there are six scenes).

Each 1st sub-group writes the story according to the choice. And then, as in the first stage, the sub-group should remain two kinds of choice. For example, "with this weapon, the warrior goes on his way. At night when he is asleep, there is a strange sound. _____ appears suddenly. (Underlined parts should be written by students.) At this point, two kinds of someone/something can be made as choices.

Third Stage: At this stage, the choices made in the second stage should be distributed to the 2nd sub-group (one 2nd sub-group is 3 persons, and there are 12 scenes). Each 2nd sub-group writes the story according to the choice. And then, the sub-group should remain two kinds of choice. For example, "_____ threatens the he/she/it _____ the warrior. The warrior uses the gift, and _____ him/her/it. He asks him/her/it where the treasure is. He/She/It says that it is in the _____." (Underlined parts should be written by students.) At this point, three kinds of place can be made as choices.

Fourth Stage: At this stage, the choices made in the third stage should be distributed to the 3rd sub-group (3rd sub-group is the same with one individual students, and there are 36 scenes). Each student writes the story according to the choice, and finishes the story. In this process, one introductory story will be finished with 36 kinds of different ending. The texts created by this model, if they are loaded into the web, can be said to be very similar to the hypertext literature. The primary advantage of this model is to let students recognize that there may be different thought between people and thinking and imagination can be expanded infinitely.

This model can be presented as in figure 3.

FIGURE 3

1st stage		2nd stage		3rd stage		4th stage		
choice1	Group1	choice 1	1st sub-g (1-1)	choice 1	2nd sub-g	choice1	3rd sub-g(1-1-1-1)	
					(1-1-1)	choice2	3rd sub-g(1-1-1-2)	
					choice3	3rd sub-g(1-1-1-3)		
		choice 2	2nd sub-g	choice 1	2nd sub-g	choice1	3rd sub-g(1-1-2-1)	
						(1-1-2)	choice2	3rd sub-g(1-1-2-2)
						choice3	3rd sub-g(1-1-2-3)	
choice 2	1st sub-g	choice 1	2nd sub-g	choice1	3rd sub-g(1-2-1-1)			
				(1-2)	choice2	3rd sub-g(1-2-1-2)		
				choice3	3rd sub-g(1-2-1-3)			

				choice 2	2nd sub-g (1-2-2)	choice1 choice2 choice3	3rd sub-g(1-2-2-1) 3rd sub-g(1-2-2-2) 3rd sub-g(1-2-2-3)
choice2	Group2	choice 1	1st sub-g (2-1)	choice 1	2nd sub-g (2-1-1)	choice1 choice2 choice3	3rd sub-g(2-1-1-1) 3rd sub-g(2-1-1-2) 3rd sub-g(2-1-1-3)
				choice 2	2nd sub-g (2-1-2)	choice1 choice2 choice3	3rd sub-g(2-1-2-1) 3rd sub-g(2-1-2-2) 3rd sub-g(2-1-2-3)
		choice 2	1st sub-g (2-2)	choice 1	2nd sub-g (2-2-1)	choice1 choice2 choice3	3rd sub-g(2-2-1-1) 3rd sub-g(2-2-1-2) 3rd sub-g(2-2-1-3)
				choice 2	2nd sub-g (2-2-2)	choice1 choice 2 choice3	3rd sub-g(2-2-2-1) 3rd sub-g(2-2-2-2) 3rd sub-g(2-2-2-3)
choice3	Group3	choice 1	1st sub-g (3-1)	choice 1	2nd sub-g (3-1-1)	choice1 choice2 choice3	3rd sub-g(3-1-1-1) 3rd sub-g(3-1-1-2) 3rd sub-g(3-1-1-3)
				choice 2	2nd sub-g (3-1-2)	choice1 choice2 choice3	3rd sub-g(3-1-2-1) 3rd sub-g(3-1-2-2) 3rd sub-g(3-1-2-3)
		choice 2	1st sub-g (3-2)	choice 1	2nd sub-g (3-2-1)	choice1 choice2 choice3	3rd sub-g(3-2-1-1) 3rd sub-g(3-2-1-2) 3rd sub-g(3-2-1-3)
				choice 2	2nd sub-g (3-2-2)	choice1 choice2 choice3	3rd sub-g(3-2-2-1) 3rd sub-g(3-2-2-2) 3rd sub-g(3-2-2-3)

The main idea of my presentation of learning models is "scene-centered" system. The term "scene" is a single concept or idea composed of a single sub-text, which is to be made by the group of students. The "scene-centered" system is, to put it into a Barte's term, a "writerly text." But in order to "write," "reading" should be accompanied. So, this system is a learning model in which writing and reading are carried on simultaneously, and in which students try to generate the cross-referenced

texts and interactive applications with other subjects. This is the reason it can be called a creative model.

IV. CONCLUSION AND SUGGESTIONS

With the advancements of information-processing devices such as digital media and web-sites which are available to most people, the necessity of applying of hypertext to the area of education is increasing. Hypertext is a user interface paradigm for displaying documents which contain automated cross-references to other documents called hyperlinks. It transcends the linear, and fixed qualities of the traditional written text. In this sense, hypertext “rightly called learning systems, rather than teaching systems.”(Mayes, Kibby & Anderson, 1990, p. 229)

In this essay, I tried to suggest three kinds of learning-models by the application of "writing" hypertext literature in the English education of an elementary school. This scene-centered system is focused directly on the collaborative composition process of students. Students, by generating sub-texts and connecting texts, perform the educational activities to expand the source text.

The scene-centered system is a text-handling system which would allow students to revise, compare, and undo their work easily. The texts students write can be overlapped or branched, but they will show what students think, imagine and feel. It will be the highlight of expressing their world. In the process of writing hypertext literature, the original text students are familiar with becomes decentered, compared with its paper counterpart. But providing help in constructing complete learner-centered narratives, writing hypertext literature will show students how various and different thinking and imagination can be.

In all this process, students play a role of multi-user, with three access rights: read, write, and annotate. So, students making use of hypertext systems will participate actively in two related ways, acting as reader-authors both by choosing individual paths through linked primary and secondary texts and by adding texts. And teachers will take the new role in collaborative writing environment: no longer the central authoritarian evaluator, they will become consultants, co-writers, coaches of their students.

But the models presented in this essay are depending on only theories. It is necessary to experiment actually in the field of education. But these models are not for the present, but for the future. With the advancement of technology, the education should

find a new paradigm for the future. This essay is aimed at it. Jean-François Lyotard describes the relations between information technology and education as follows:

“. . . the miniaturization and commercialization of machines is already changing the way in which learning is acquired, classified, made available, and exploited. It is reasonable to suppose that the proliferation of information-processing machines is having, and will continue to have, as much of an effect on the circulation of learning as did advances in human circulation (transportation system) and later, in the circulation of sounds and visual images (the media)"(*Postmodern Condition*, 4).

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Examples in: English

Applicable Languages: English

Applicable Levels: Elementary/College

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Received in April, 2005

Reviewed in May, 2005

Revised version received in June, 2005